

REMARKS

Reexamination and reconsideration of this application in view of the following remarks is respectfully requested. By this amendment, claims 1, 9, 12 and 17 are amended; no claims are currently canceled; and new claim 25 is added. After this amendment, claims 1, 2, 3, 9, 10, 11, 12, 17, 18, 24 and 25 remain pending in this application.

Claim Rejections - 35 USC §103

Reconsideration of the rejection of claims 9-12 under 35 U.S.C. § 103(a) as being unpatentable over Rawson et al., (U.S. Pat. No. 5,692,204), hereinafter “Rawson”, in view of Balasubramanian (U.S. Pat. No. 6,487,455) is respectfully requested in view of the amendment to independent claim 9 and for the following reasons.

With the Applicants’ invention, the operating system software of the electronic device accesses resource requirements associated with an application prior to any execution of any code of the application. The method in accordance with the Applicants’ invention evaluates the current state of the electronic device and decides before the application is executed by the electronic device, how an application will or will not be executed.

On the other hand, with Rawson, any resources requirements needed by an application, such as power management, is performed only after the application has started, i.e., only after some of the code of the application has already executed. Rawson teaches a set of power management system calls that may be accessed by either a power management proactive application (203) or a Command Script (201). In this way, a script or an application, which is already running, is given a way to register its requirements and then to suspend its operation until the registered requirements are met. With the Applicants’ invention, the resource requirements (which may include power management requirements) are attached in a Java Descriptor file as metadata to an application, so that the operating system may examine the requirements before any portion of the application starts to run.

Claim 9 was amended to specifically recite that the metadata is in a form of a Java Descriptor file. The following excerpts from the Applicants’ specification teach placing the resource requirements of an application in a Java Descriptor file (JAD) associated with the application. See page 12, line 16 to page 14, line 14 of the Applicants’ specification, as follows:

"In one embodiment of the present invention, an application resource requirement (ARR) file 352 associated with the application 350 can also be stored in the storage module 310. ARR file 352 includes data related to the application resource requirements associated with the execution of the application 350 on the wireless device 106. A more detailed description of application resource requirements is provided below. ARR file 352 can be a Java Descriptor file (JAD) or other file typically used for holding metadata pertaining to another file and be stored as part of the file or in a resource directory such as a bat, dat, registry, or other resource file. An exemplary JAD file including power management and performance application resource requirements is shown below.

*MIDlet-1: AsteroidsGame,
AsteroidsGame.png,
com.mot.j2me.midlets.AsteroidsGame*

*MIDlet-Jar-Size: 134859
MIDlet-Jar-URL: AsteroidsGame.jar
MIDlet-Name: AsteroidsGame
MIDlet-Vendor: Motorola, Inc.
MIDlet-Version: 85.00.16
SMTPServer: idenmoto.com
iDEN-MIDlet-Performance-FPS-TARGET: 12 // 12 Frames/Second iDEAL
iDEN-MIDlet-Performance-MIPS-AVG: 5 // Average 5 MIPS
iDEN-MIDlet-Performance-MIPS_MIN: 3 // Need at least 3 MIPS to Run
iDEN-MIDlet-Performance-MIPS_BACKG: 0.3 // Need at least 0.3 MIPS
// to Run when used in
// Background mode.
iDEN-MIDlet-Performance-Class: None // Not performance critical App
iDEN-MIDlet-Performance-IO: None // No a factor for this App*

*MIDlet-1: MP3AUDIOPlayer, MP3AUDIOPlayer.png,
com.mot.j2me.midlets.MP3AUDIOPlayer
MIDlet-Jar-Size: 234200
MIDlet-Jar-URL: MP3AUDIOPlayer.jar
MIDlet-Name: MP3AUDIOPlayer
MIDlet-Vendor: Motorola, Inc.*

MIDlet-Version: 85.00.11

SMTPServer: idenmoto.com

iDEN-MIDlet-Performance-FPS-TARGET: 15 // 12 Frames/Second iDEAL

iDEN-MIDlet-Performance-MIPS-AVG: 50 // Average 50 MIPS

iDEN-MIDlet-Performance-MIPS_MIN: 35 // Need at least 35 MIPS to Run

*iDEN-MIDlet-Performance-MIPS_BACKG: 10 // Need 10 MIPS when placed on
// Background Mode*

iDEN-MIDlet-Performance-Class: Medium // Relative Performance App

iDEN-MIDlet-Performance-IO_SDIO: 44kb // Need BW from SDIO port” [Emphasis added]

Therefore, because the Applicants’ invention uses metadata in a Java Descriptor file that is embedded in an application, the application does not have to first execute for the operating system to determine the resource requirements of the application. With the Applicants’ invention, the resource requirements of an application can be determined prior to the application running. With the Applicants’ invention, the resource requirements of an application can be determined without the application ever running (not even once). This is in contrast with Rawson, which requires each application to execute its application code, wherein the application code of Rawson makes system calls to provide resource requirements to the operating system.

Neither Rawson nor Balasubramanian discloses metadata in a form of a Java Descriptor file. The combination cited by the Examiner fails to disclose all the steps of amended claim 9. In particular, combination cited by the Examiner fails to disclose the second step of amended claim 9, to wit:

“prior to any execution of any code associated with the application, reading an application priority level application resource requirement of the application stored in metadata associated with the application, in which the application priority level application resource requirement indicates how important it is for the single processor to execute the application in the regular performance mode, **and in which the metadata is in a form of a Java Descriptor file;**”

The change to second step of amended claim 9 is supported by the specification, including, for example, at page 15, lines 12-16 (which was reproduced above). No new matter was added.

Furthermore, combination cited by the Examiner fails to disclose the last step of amended claim 9, to wit:

“if the application priority level application resource requirement associated with the application includes a high priority level, then preventing the execution of other low priority applications on the single processor of the electronic device while the application that has a high priority level is being executed.”

The newly added last step of amended claim 9 is supported by the specification, including, for example, at page 19, lines 13-24. No new matter was added.

The Applicants agree with the Examiner that Rawson does not teach that the application resource requirement of the application is stored in metadata associated with the application. Also, the Applicants agree with the Examiner that Rawson does not teach that resource requirements are declared by a software developer.

The Examiner also cited the following portion of Balasubramanian in support of the rejection of claim 9:

At process block 56 the operating system code 48 checks that the high-level requirements 40 have been identified for the application program. This identification may read a prepared file of the high-level requirements 40 or may solicit the programmer to input the necessary information about the high-level requirements 40 through a menu structure or the like, or may be semiautomatic involving a review of the application program 34 for its use of hardware resources and the like. As shown and described above with respect to FIG. 4, principally four high-level requirements are anticipated, that of hardware requirements, completion-timing constraints, message sizes, and the inter-arrival period. Other high-level requirements are possible including the need for remote system services, the type of priority of the application, etc.

The Applicants disagree with the Examiner that the use of a prepared file of requirements by Balasubramanian is related to the Applicants' invention. Balasubramanian discloses a distributed control system that includes multiple nodes 12a, 12b and 12c. Each node has its own processor 26a, 26b and 26c, respectively. The nodes have inputs and outputs A, B, C and D.

The distributed control system of Balasubramanian is pictured in FIG. 4 thereof, where multiple processors are clearly indicated. Therefore, the operating system of Balasubramanian is applicable only to a distributed control system that has multiple processors.

The “high-level requirements 40” referred to in the above portion of Balasubramanian that was cited by the Examiner are described more fully elsewhere in Balasubramanian. See for example, col. 5, line 43 to col. 6, line 21, where it is explained that the “high-level requirements 40” relate to how the multiple nodes (each node having a processor) of Balasubramanian work together. Therefore, the “high-level requirements 40” of Balasubramanian are requirements related to multiple processors. Such “high-level requirements 40” of Balasubramanian are unrelated to the Applicants’ invention because the Applicants’ electronic device comprises a single processor, as recited in amended claim 9. Therefore, amended claim 9 should be allowed.

Referring now specifically to the rejection of claims 10-12. Claims 10-12 depend upon independent claim 9, and because dependent claims recite all the limitations of the independent claim, it is believed, for at least this reason, that dependent claims 10-12 also recite in allowable form.

Accordingly, the Applicants believe that the rejection of claims 9-12 under 35 U.S.C. §103(a) as being unpatentable over Rawson in view of Balasubramanian has been overcome. The Examiner should withdraw the rejection of claims 9-12.

Reconsideration of the rejection of claims 1-3, 17-18 and 24 under 35 U.S.C. §103(a) as being unpatentable over Rawson in view of Balasubramanian, in view of Guzzi et al., (U.S. Pat. Pub. No. US2001/0049847 A1), hereinafter “Guzzi”, and further in view of Diepstraten et al., (U.S. Pat. No. 6,243,736), hereinafter “Diepstraten”, is respectfully requested in view of the amendments to claim 1 and independent claim 17, and for the following reasons. Claims 1 and 17 were amended to more clearly recite the Applicants’ invention. No new matter was added.

Referring now specifically to the rejection of claim 1. Neither Rawson, Balasubramanian, Guzzi, nor Diepstraten discloses metadata in a form of a Java Descriptor file, as recited in amended claim 1, and as discussed hereinabove with respect to the rejection of claim 9.

Referring now specifically to the rejection of claim 17. Claim 17 has been amended to distinguish over the combination of references cited by the Examiner. The combination cited by

the Examiner fails to disclose all the steps of amended claim 17. In particular, the combination fails to disclose the following steps of amended claim 17:

“a secure digital input/output (I/O) slot for receiving a MPEG4 video clip from a secure digital I/O card;

* * *

a display, for indicating to the user that the MPEG4 video clip cannot be executed on the electronic device without performance of the MPEG4 video clip being adversely affected, for indicating to the user that the I/O bandwidth application resource requirement cannot be met by the electronic device, for indicating to the user how the electronic device can be modified to meet the I/O bandwidth application resource requirement, and for prompting the user for agreement to modify the electronic device, in which the user interface receives a command indicating that the user agrees to a modification of the electronic device to meet the I/O bandwidth application resource requirement of the application, in which the processor modifies the electronic device, and in which, subsequent to modifying the electronic device, the processor executes the MPEG4 video clip on the electronic device.”

The changes to amended claim 17 are supported by the specification, including, for example, at page 19, lines 13-24, which is reproduced below for the Examiner's convenience:

“The I/O bandwidth application resource requirement indicates the amount of bandwidth that is necessary in the file system, the network connection, a peripheral or system memory of the electronic device that is required for execution of the application 350. In this embodiment, the application 350 is used to determine if enough resources are available on the electronic device. For example, assume that the user is playing an MPEG4 video clip with MP3 audio from a Secure Digital I/O (SDIO) slot and the user tries to execute an application 350 that requires access to the SDIO card to read data. Then, if there is not enough bandwidth available to run both applications, the present invention should alert the user of the problem rather than affecting the performance of the MPEG4 video clip. Furthermore if the priority level of the MPEG4 player is high, then low priority applications will not be allowed to run.”

The Applicants agree with the Examiner's statement, "Rawson does not teach indicating to a user that the application cannot be executed on the electronic device, indicating to the user which application resource requirement cannot be met by the electronic device, indicating to the user how the electronic device can be modified to meet the application resource requirement, prompting the user for agreement to modify the electronic device, in response to a command indicating agreement, modifying the electronic device to meet the application resource requirement associated with the application, and executing the application on the electronic device".

However, the Applicants disagree with the Examiner that the recommendations made by Guzzi are similar to the way the Applicants' electronic device operates. Furthermore, neither Rawson, Balasubramanian, Guzzi nor Diepstraten discloses an electronic device having a secure digital input/output (I/O) slot for receiving a MPEG4 video clip from a secure digital I/O card, as recited in amended claim 17.

Referring now specifically to the rejection of claims 2, 3, 18 and 24. Claims 2-3 depend upon independent claim 1, and claims 18 and 24 depend upon independent claim 17, and because dependent claims recite all the limitations of the independent claim, it is believed, for at least this reason, that dependent claims 2, 3, 18 and 24 also recite in allowable form.

Therefore, the Applicants believe that the rejection of claims 1-3, 17-18 and 24 under 35 U.S.C. §103(a) as being unpatentable over Rawson in view of Balasubramanian, in view of Guzzi, and further in view of Diepstraten, has been overcome. The Examiner should withdraw the rejection of claims 1-3, 17-18 and 24.

Conclusion

The foregoing is submitted as full and complete response to the Office Action dated January 22, 2009. It is believed that the application is now in condition for allowance. Allowance of claims 1, 2, 3, 9, 10, 11, 12, 17, 18, 24 and 25 is respectfully requested.

No amendment made was related to the statutory requirements of patentability unless expressly stated herein. No amendment made was for the purpose of narrowing the scope of any claim, unless the Applicants have argued herein that such amendment was made to distinguish over a particular reference or combination of references.

The Applicants acknowledge the continuing duty of candor and good faith in the disclosure of information known to be material to the examination of this application. In accordance with 37 CFR §1.56, all such information is dutifully made of record. The foreseeable equivalents of any territory surrendered by amendment is limited to the territory taught by the information of record. No other territory afforded by the doctrine of equivalents is knowingly surrendered and everything else is unforeseeable at the time of this amendment by the Applicants and their attorneys.

The Commissioner is hereby authorized to charge any fees that may be required or credit any overpayment to Deposit Account No.: **50-1556**.

PLEASE CALL the undersigned attorney at (561) 989-9811, should the Examiner believe a telephone interview would help advance prosecution of the application.

Respectfully submitted,

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